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Docket No.: **1270-004**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT OPERATION

In re Application of:
Richard A. McGregor

Group Art Unit: -- 1616
Examiner: -- George, Konata M

Serial No.: **09/865,346**

Filed: **May 25, 2001**

For: **NUCLEOTIDE COMPOUNDS THAT BLOCK THE BITTER TASTE OF ORAL COMPOSITIONS**

New York, NY 10036
Date: December 31, 2003

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION

SIR:

Applicant herein responds to the Office Action dated October 3, 2003, in the above identified patent application, in which the Examiner made final his rejection of the pending claims. Reconsideration is respectfully requested based on the following.

I hereby certify that this correspondence is being deposited with the United States Postal Service on **December 31, 2003** as first class mail in an envelope addressed to:
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James V. Costigan, Registration No. 25,669

In item 3 of the Office Action the Examiner rejected Claims 8, 13, 21 and 26-31 under the provision of 35 U.S.C. 102 (b) as being anticipated by Kohjin (JP 11-169131). More particularly, the Examiner stated that Kohjin discloses a technique of masking the taste, acidity and a scent from the salt of food by using 5' uridylic acid sodium (UMP) or 5' cytidylic acid sodium (CMP), and describes the types of food to which 5'uridylic acid sodium (UMP) or 5"cytidylic acid sodium (CMP) can be added to, some examples are miso soup, vinegar, bitter orange juice, etc. Reconsideration is respectfully requested.

The presently claimed invention is directed to a composition and a method for inhibiting the sensory perception of **bitterness.** The inhibitors of the invention may be used as flavor enhancers in foods and beverages. The present invention is based, at least in part, on the discovery that nucleotide compounds are capable of inhibiting the activation of G-proteins involved in the perception of bitterness. The inhibitors of this invention when administered to a subject in an effective amount may be used as flavor enhancers in foods and beverages to overcome their **bitter taste**. Wherein, the inhibitor is a purine or pyrimidine group, or derivative thereof, and an ionizable phosphate or other anionic organic molecule.

In sharp contrast, Kohjin describes in the Object of the Invention, "the purpose of this invention -- the salt of food -- it is offering the technique of masking these without almost giving change to a pungent taste, acidity, the effective masking technique of a scent, especially other tastes". (see Kohjin at paragraph [0005]). Specifically, the Kohjin reference teaches a Means for Solving a Technical Problem described by the use of 5'-uridylic acid sodium (UMP) and 5'-cytidylic-acid sodium (CMP) for masking the "salt of food—the technique of masking a pungent taste, acidity, or a scent is offered". (see Kohjin at paragraph [0006]).

It is well documented that the sense of taste is divide into five predominant categories, of which bitter and salty are distinguished. The cited prior art relates to a "technique of masking the taste, **acidity**, and **scent** from the **salt** of food" (see Kohjin, Detailed Description at paragraph [0001]). All of the Examples, the results of which are entered into Tables, are limited to the sensory perceptions of acidity, scent and salt. The first of these three sensory effects is measured in Example 7 which "evaluated **acidity** by the ranking method," and the results are shown in Table 3. (see Kohjin at paragraph [0018]). Examples 4, 5, 8 and 9 further demonstrate Kohjin's use UMP and CMP to mask the "**acid**" taste of various foods consumed by the participants in these experiments. (see Kohjin at paragraphs [0020] and [0021]). Further, Tables 4 and 5 display the results of organoleptic testing of "**a scent**" as experienced by the participants who sampled Examples 6, 8, 10, 12 and 14. (see Kohjin at paragraph [0023] through [0029]). Lastly, Kohjin describes the organoleptic testing of "a **salt - -** the ranking method", with the use of Examples 1-3, and the results are shown in Table 1. (see Kohjin at paragraph [0012]).

As noted in the "Effect of the Invention," the cited prior art relates to "scent/the taste, acidity or... from the salt of food by what UMP or CMP is added", (see Kohjin at paragraph [0030]), and **not** as an inhibitor of bitterness in food or beverages.

The Applicant maintains that the Kohjin reference teaches the use of 5'-uridylic acid sodium (UMP) and 5'-cytidylic-acid sodium (CMP) for masking the salty taste of food, and not as a bitterness inhibitor. Applicant acknowledges Kohjin's reference to "bitter orange juice," however; this phrase refers to the juice of the plant *Citrus aurantium*, whose common name is "bitter orange". Moreover, Kohjin categorizes these foods "such as food which has acidity, such as fruit-juice drinks, such as lemon and an orange" which can be "masked" by 5'-uridylic acid sodium (UMP) and 5'-cytidylic-acid sodium (CMP). (see Kohjin, paragraph [0007]). Applicant wishes to point out that the term "**bitter**" is not found anywhere else in the reference. More importantly, the reference is replete with the "technique of masking", "the salty taste," "a pungent taste,

acidity, or a scent", (see Kohjin, Abstract, Claim 1, paragraphs [0001], [0003], [0004], [0005], [0006], [0010] and [0030]). Specifically, the "pungent taste" of **salt** (see Kohjin at paragraph [0015]) in food as represented in the Example 1 which contains 162g of salt, 120g of sodium glutamates, and Example 2 which contains soy sauce, 5g MSG, were masked by UMP and CMP and administered to test subjects for their taste masking effects.

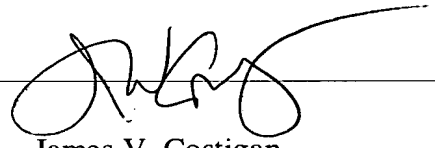
The presently claimed invention discloses a novel method which "abrogate the perception of **bitterness** of bitter tastants" (see Specification page 6, lines 1-2, Claims 8, 13, 21 and 26-31), by inhibiting the activation of G-proteins by bitter tastant-stimulated taste receptors and results in responses which indicate that the sensation of bitterness is diminished (see Specification at page 5, paragraph [0009]). The sense of taste can be divided into five predominant categories: bitter, salty, sour, sweet and umami (the Japanese word describing the taste of monosodium glutamate; Herness, M.S. & Gilbertson, T.A., 1999, *Annu. Rev. Physiol.* 61:873-900). The presently claimed invention inhibits bitter taste perception, whereas the cited prior art teaches a composition to mask the salty taste of food (See Kohjin at paragraph [0005]).

A prima facie case of anticipation, according to the Federal Circuit, "requires the presence in a single prior art disclosure of each and every element of the claimed invention." *Lewmar Marine v. Barient, Inc.* 3 U.S.P.Q.2d 1766, 1767 (Fed. Cir. 1987). Upon comparison to the present invention, it must be pointed out that the Kohjin reference clearly does not teach **inhibiting** the **bitter** taste of a bitter tastant. For these reasons the § 102(b) rejection over Kohjin is improper. Removal of the rejection is therefore requested.

In view of the foregoing discussion, applicant respectfully submits that the pending claims are allowable over the cited prior art. Allowance of the claims are therefore respectfully solicited

An early and favorable action is earnestly solicited.

Respectfully submitted,



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